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# 2016 Bench Memorandum

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**TWENTY-EIGHTH ANNUAL  
JEFFREY G. MILLER  
NATIONAL ENVIRONMENTAL LAW  
MOOT COURT COMPETITION**

**PACE LAW SCHOOL**

**2016 Bench Memorandum**

**I. REGULATORY AND FACTUAL FRAMEWORK**

**A. PARTIES**

Sylvanergy is a limited liability company located in the State of New Union. It plans to construct a new biomass-fired electricity plant in the Village of Forestdale. The proposed facility would consist of a biomass boiler electricity generation unit and a wood pellet fuel production plant. Sylvanergy requested that the state air pollution control agency, the New Union Air Resources Board (NUARB), exempt its biomass facility from preconstruction permitting requirements under the Clean Air Act's Prevention of Significant Deterioration (PSD) program, but NUARB denied this request. Sylvanergy subsequently filed for a PSD permit as a major emitting facility. The final PSD permit requires Sylvanergy to implement a Sustainable Forest Plan by purchasing and managing a dedicated reforestation area.

Save Our Climate (SOC) is a non-profit organization under the laws of New Union. SOC is concerned about the environmental and climate impacts of the Sylvanergy biomass facility. It became involved in the PSD permit proceeding for the proposed facility in its early stages. SOC filed extensive public comments on the draft permit, arguing that the facility should be

subject to BACT review for greenhouse gas emissions and, specifically, that partial carbon capture and storage should be imposed as BACT. The Court has already determined that SOC, along with the other parties, has standing to pursue judicial review of the petition.

Shaney Granger (Granger or the Regional Administrator) is the Regional Administrator for Region XIII of the United States Environmental Protection Agency (EPA). EPA is the federal agency responsible for enforcing and administering select environmental laws and regulations. Its mission is to protect human health and the environment. EPA has delegated its authority for issuance of Clean Air Act PSD permits in the State of New Union to NUARB. Although NUARB is the head agency involved in the PSD permitting process, in cases where the Environmental Appeals Board denies initial review of the permit, the EPA Regional Administrator must place her final approval on the PSD permit and publish the “final permit decision” in the Federal Register. *See* 40 CFR § 124.19(l)(2)(i) (2015). Thus, as the EPA Regional Administrator, Granger is the appropriate respondent for the purposes of judicial review because Granger, in her official capacity, issued the final permit decision at issue. Granger’s position will most often be referred to generally as “EPA’s” position.

## **B. APPLICABLE LEGAL AUTHORITY\***

Enacted in 1955 and significantly amended in 1963, 1970, 1977, and 1990, the Clean Air Act is the comprehensive federal law that regulates air emissions from stationary and mobile sources in the U.S. Through the Act, EPA regulates emissions of “air pollutants,” which are broadly defined to mean “any air pollution agent or combination of such agents, including any physical, chemical, biological, radioactive . . . substance or matter which is emitted into or other otherwise enters the ambient air.”

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\* *See generally Overview of the CAA*, in CHRIS WOLD ET AL., CLIMATE CHANGE AND THE LAW at 539-43 (2009). Readers seeking additional review of the Clean Air Act’s regulatory framework should consult EPA’s Clean Air Act website, which includes among other resources a “Plain English” overview of the Act and links to the current statutory text.

CAA § 302(g), 42 U.S.C. § 7602(g) (2012). Pursuant to section 108(a)(1) of the Act, if EPA determines that a given air pollutant “may reasonably be anticipated to endanger public health or welfare,” EPA must place the pollutant on a published list, thus making it a “regulated pollutant” subject to the various regulatory provisions of the Act. 42 U.S.C. § 7408(a)(1) (2012). EPA is required to publish and maintain National Ambient Air Quality Standards (NAAQS) for six common air pollutants, known as “criteria pollutants:” Particulate Matter (PM); Sulfur Dioxide (SO<sub>2</sub>); Nitrogen Oxides (NO<sub>x</sub>); Ground-Level Ozone, Carbon Monoxide (CO); and Lead. Importantly, the regulatory requirements differ for areas that are considered to be in compliance with the NAAQs—so-called “attainment” areas—and areas that are not in compliance—non-attainment areas. Attainment areas are further divided into three Classes, allowing for different levels of increases in certain air pollutants, with Class I areas such as national parks and wilderness areas receiving the highest degree of protection. Criteria pollutants are distinguished from hazardous air pollutants (HAPs), 187 of which EPA regulates through its Air Toxics program. The Clean Air Act contemplates a “cooperative federalism” scheme, under which the federal government delegates power to carry out the requirements of the Act to the states. States must submit State Implementation Plans (SIPs) to demonstrate how they will meet NAAQS and other CAA requirements within their borders. *See* CAA § 110, 42 U.S.C. § 7410. Once approved by EPA, the SIP becomes federal law. *Id.*

The Act differentiates between emissions limitations for stationary sources (Titles I, V) and mobile sources (Title II). It also has different requirements for existing sources, which may be grandfathered in certain respects (e.g., CAA § 111(d)), and proposed new sources, which are subject to more stringent standards (e.g., CAA § 111(b)). New stationary sources are regulated by two main schemes. The first is the section 111 New Source Performance Standards (NSPS), which require certain categories and classes of new stationary sources to comply with emissions standards based on the best demonstrated technology. *See* CAA § 111(a)-(b), U.S.C. § 7411(a)-(b) (2012). The second is the New Source Review (NSR) program, which develops technological requirements for emissions control through

permitting. Within New Source Review, new stationary sources and major modifications of existing sources in attainment areas are subject to the Prevention of Significant Deterioration (PSD) permitting program, *see* CAA §§ 160-196, 42 U.S.C. §§ 7470-7479 (2012).<sup>1</sup>

In the context of this year's Problem, Sylvanergy has proposed to develop a new stationary source in an attainment area. Thus, the focus is narrow and implicates the PSD program, found in sections 160 through 169 of the Act. The Congressional purposes of the PSD program include: (1) to protect public health and welfare from any adverse effects of air pollution; (2) "to insure that economic growth will occur in a manner consistent with the preservation of existing clean air resources;" (3) to prevent new non-attainment areas and assure that emissions from one state will not interfere with PSD efforts in another state; and (4) "to assure that any decision to permit increased air pollution . . . is made only after careful evaluation of all the consequences of such a decision and after adequate procedural opportunities for informed public participation in the decisionmaking process." CAA § 160, 42 U.S.C. § 7470. Under the PSD program, all "major emitting facilities" that will emit more than a threshold level of regulated pollutants must first obtain preconstruction approval in the form of a PSD permit. CAA §§ 165(a), 169(1), 42 U.S.C. §§ 7475(a), 7479(1). This includes "fossil-fuel fired steam electric plants" and other enumerated source categories with heat input capacities of more than 250 MMBtu per hour, if they have the potential to emit more than 100 tons per year of regulated air pollutants. CAA § 169, 42 U.S.C. § 7479(1). All other facilities are considered "major" if they have the potential to emit more than 250 tons per year of a regulated air pollutant. *Id.*

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1. New stationary sources and major modifications in non-attainment areas, by contrast, are subject to Non-Attainment New Source Review (NNSR). *See* CAA §§ 171-193, 42 U.S.C. §§ 7501-7515 (2012). The Clean Air Act also includes regulatory programs designed to address specific environmental problems such as acid rain (Title IV-A) and ozone depletion (Title VI). Title V of the Act requires major sources of air pollutants, and certain other sources, to obtain and operate in compliance with an operating permit. None of those Titles are at issue in the Problem, but competitors may look to parallel definitions or requirements in the Act for persuasive guidance.

New facilities subject to PSD review must achieve emissions limits that reflect the Best Available Control Technology, or BACT, for regulated pollutants that they emit at significant rates. See CAA § 165(a)(4), 42 U.S.C. § 7475(a)(4). BACT is defined as

an emission limitation based on the maximum degree of reduction of each pollutant subject to regulation under this chapter emitted from or which results from any major emitting facility, which the permitting authority, on a case-by-case basis, taking into account energy, environmental, and economic impacts and other costs, determines is achievable for such facility through application of production processes and available methods, systems, and techniques, including fuel cleaning, clean fuels, or treatment or innovative fuel combustion techniques for control of each such pollutant.

CAA § 169(3), 42 U.S.C. § 7479(3); see also 40 C.F.R. § 52.21(b)(12) (2015).

Since the hallmark decision in *Massachusetts v. EPA*, 549 U.S. 497 (2007), which established that greenhouse gases fall within the Act’s broad definition of “air pollutant” and spurred EPA’s 2009 “endangerment finding” with regard to greenhouse gas emissions from mobile sources, the manner in which EPA will regulate these emissions from stationary sources through the CAA framework has remained in flux. With specific regard to the PSD program, the regulations provide that PSD review applies not only to criteria pollutants, but to “any pollutant that otherwise is subject to regulation under the Act.” 40 C.F.R. § 52.21(50)(iv). In 2010, EPA issued its GHG Tailoring Rule, setting special emissions thresholds for greenhouse gases to define when PSD and Title V Operating Permits would be required. The threshold for PSD permitting, effective January 2011, was 75,000 tons per year CO<sub>2</sub>e. 40 C.F.R. § 52.21(49)(iv). In 2014, the Supreme Court held in *Utility Air Regulatory Group v. EPA* (“UARG”), 573 U.S. \_\_\_, \_\_\_, 134 S. Ct. 2427 (2014), that EPA could not subject sources to PSD review solely on the basis of their greenhouse gas emissions. Under that ruling, however, sources that would be subject to PSD permitting and BACT for other air pollutants (so-called “anyway sources”) are subject to BACT review for greenhouse gas emissions. The UARG decision

required EPA to publish a new *de minimis* threshold level for triggering PSD review for greenhouse gases from these anyway sources. The Court did not reject 75,000 tons per year as a possible *de minimis* level but stated that EPA must identify a “true *de minimis*” level based on proper methodology. EPA initiated a rule-making in April 2015 to identify a new significant emissions rate threshold for greenhouse gases and has projected a proposed rulemaking for June 2016.

**List of Applicable Rules of Law:**

- Clean Air Act § 160, 42 U.S.C. § 7470 (2012)
- Clean Air Act § 165, 42 U.S.C. § 7475 (2012)
- Clean Air Act § 169, 42 U.S.C. § 7479 (2012)
- Clean Air Act § 307, 42 U.S.C. § 7607 (2012)
- Definition, Major Stationary Source, 40 C.F.R. § 52.21(b)(1)(i) (2015)
- Definition, BACT, 40 C.F.R. § 52.21(b)(12) (2015)
- Definition, Potential to Emit, 40 C.F.R. § 52.21(b)(4)
- Definition, Federally Enforceable, 40 C.F.R. § 51.21(b)(17)
- EPA Delegation Authority, 40 C.F.R. § 52.21(u) (2015)
- Appeal of PSD Permits, 40 C.F.R. § 124.19 (2015)

**Non-Binding Agency Guidelines:**

- NEW SOURCE REVIEW WORKSHOP MANUAL: PREVENTION OF SIGNIFICANT DETERIORATION AND NONATTAINMENT AREA PERMITTING (“NSR MANUAL”) (1990)
- GUIDANCE FOR DETERMINING BEST AVAILABLE CONTROL TECHNOLOGY FOR REDUCING CARBON DIOXIDE EMISSIONS FROM BIOGENIC PRODUCTION (“GUIDANCE FOR DETERMINING BACT”) (2011)
- DRAFT FRAMEWORK FOR ASSESSING BIOGENIC CO<sub>2</sub> EMISSIONS FROM STATIONARY SOURCES (2014)

### C. SUMMARY OF FACTS AND PROCEDURE

The undisputed facts established by the Environmental Appeals Board are as follows:<sup>2</sup>

Sylvanergy, L.L.C., has proposed to construct a new biomass facility in the Village of Forestdale, New Union. New Union is considered to be an attainment area under the Clean Air Act, meaning that new major emissions sources are subject to the preconstruction permitting process under the Prevention of Significant Deterioration (PSD) program of the Clean Air Act. The New Union Air Resources Board (NUARB), as the state permitting agency, is authorized to issue PSD preconstruction permits pursuant to a delegation memorandum entered into between Region XIII of EPA and the State of New Union. As proposed, the Forestdale Biomass Facility would house two components: a biomass-fired electricity generation unit with a heat input capacity of 500 MMBtu/hour<sup>3</sup> and a wood pellet fuel production plant. The electricity generation unit (EGU) would include an advanced stoker design wood-fired boiler with two ultra-low sulfur diesel (ULSD) start-up burners, each with a maximum heat input rate of 60 MMBtu/hr. The EGU would have an electrical generation capacity of 40 MW.

Sylvanergy has estimated that, based on an operational capacity of 96 percent, the facility would emit the following amounts of the following regulated air pollutants (in tons per year): PM 2.5: 63; SO<sub>2</sub>: 45; **NO<sub>x</sub>: 110**; **CO: 255**;<sup>4</sup> Volatile Organic Compounds (VOC): 40. However, operations at the biomass facility are subject to certain limitations in a site plan approval issued by the Village of Forestdale, which limits operations to no

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2. Although this factual summary contains all pertinent facts and procedure as developed by the opinion of the Environmental Appeals Board, it is condensed. Judges and brief graders should also review the Problem.

3. MMBtu stands for one million British Thermal Units (Btu). A Btu is a measure of the energy content in fuel. Btu *per hour* is a measure used to describe the power or capacity of an electricity generation unit (EGU) and is used to measure both the energy input and the energy output of the EGU. Here, the relevant statistic is the heat *input* capacity, or burn rate, of the biomass EGU in MMBtu per hour.

4. The bolded numbers represent emissions levels above the PSD thresholds—either 100 or 250 tons per year—for a “major emitting facility” under section 169(1) of the Act, 42 U.S.C. § 7479(1).



more than 6,500 hours per year—the equivalent of a capacity factor of 75 percent. This limitation can be enforced by the building inspector of Forestdale. It was adopted to mitigate the impact of log trucks bringing raw logs to the facility for processing into pellet fuel. Based on this lower capacity factor, the facility would emit the following air pollutant amounts (in tons per year): PM 2.5: 47; SO<sub>2</sub>: 32; NO<sub>x</sub>: 80; **CO: 190**; VOC: 30. In addition, the facility would emit 350,000 tons per year of greenhouse gases in carbon dioxide equivalents (CO<sub>2</sub>E) while operating at full capacity.

On January 15, 2013, Sylvanergy petitioned NUARB for a Non-Applicability Determination (NAD), urging NUARB to conclude that it did not meet the relevant emissions thresholds to qualify as a “major emitting facility” pursuant to section 169(1) of the Act, 42 U.S.C. § 7479(1) (2012). Specifically, Sylvanergy argued that (1) it was not a “fossil-fuel fired steam electric plant” subject to the 100-ton-per-year threshold for emissions; and (2) due to the 75-percent capacity operational limit imposed on it by the Forestdale site plan approval, it would not have the potential to emit more than the otherwise-applicable threshold of 250 tons per year of regulated pollutants. NUARB rejected both of these arguments and denied the NAD, reasoning that (1) since the facility would include ULSD start-up burners, it was a fossil-fuel fired facility subject to the 100-ton-per-year threshold pursuant to 42 U.S.C. § 7479(1) despite its primary reliance on wood biomass for energy production; and (2) even if the facility was not fossil-fuel fired, the restriction on operating hours contained in the Forestdale site plan approval did not constitute a “federally enforceable” limitation, as required by 40 C.F.R. § 52.21(b)(4) (2015). Sylvanergy then filed a PSD preconstruction permit application under protest.

NUARB published a draft permit for public comment on September 12, 2013. Over Sylvanergy’s objection, NUARB conducted a BACT review for greenhouse gas emissions as part of the PSD permit for the proposed facility, using a 96 percent capacity factor. While Sylvanergy argued that it should be considered to have zero greenhouse gas emissions as a biomass facility, SOC filed detailed comments on the proposed permit and argued that not only was the Sylvanergy facility subject to BACT

review for greenhouse gas emissions, but that NUARB should determine that BACT for greenhouse gases from the facility was partial carbon capture and storage using a system of wood fuel gasification and combined cycle combustion. NUARB issued the final PSD permit on June 12, 2014. In the final permit, NUARB approved Sylvanergy's proposed flue controls for particulates, sulfur dioxide, nitrogen oxides, carbon monoxide, and VOCs as constituting the BACT as required by section 165(a)(4) of the Act, 42 U.S.C. § 7475(a)(4). Thus, Sylvanergy has *not challenged* permit requirements for these regulated pollutants. To summarize NUARB's BACT review for greenhouse gases as reflected in the final permit, which the parties *do challenge*, the agency applied a top-down approach to available control technologies for greenhouse gases as follows: (a) NUARB considered carbon capture and storage as the technology capable of achieving the greatest reduction in greenhouse gas emissions but rejected it on the grounds that there was no proven technology for removing CO<sub>2</sub> from the dilute flue gas streams that result from biomass combustion; (b) NUARB considered whether use of alternative fuels such as natural gas or oil would result in lower carbon emissions for a 40-MW generation facility, and it concluded that such alternative fuels would constitute a redefinition of the facility and could not be considered as BACT; (c) NUARB considered and rejected the implementation of wood gasification and partial carbon capture and storage as an impermissible redefinition of the proposed source; and, finally, (d) NUARB considered and ultimately selected as BACT for the biomass facility the implementation of a Sustainable Forest Plan, which would require Sylvanergy to purchase and maintain a dedicated reforestation area.

NUARB concluded that based on an assumed production rate of 10 dry tons of wood per hectare per year, the acquisition of 25,000 hectares of dedicated forest land at a total cost of approximately \$10 million was economically feasible. The Sustainable Forest Plan would offset approximately 70 percent of the greenhouse gas emissions of the plant and assure sustainable biomass feedstock production based on short-rotation coppice plantings such as poplar. NUARB noted that the requirement to acquire and maintain this forestation area was consistent with, and required by, New Union Executive Order 005-12, which

provides that all State agencies in New Union must, to the maximum extent allowed by law, ensure that any new construction project they undertake or approve will be carbon neutral. The Executive Order does not distinguish between actions taken pursuant to State law and actions taken pursuant to delegated federal authority. During the permit proceedings, Sylvanergy did not challenge NUARB's finding that suitable forestry land is available in the vicinity of Forestdale at a total cost of \$10 million, nor did it contend that this cost would render the project economically unviable.

The record contains the following additional information with regard to NUARB's BACT analysis. SOC submitted on the record multiple studies in support of the feasibility of wood gasification and combined cycle gasification technology, which uses steam reformation of the resulting synthetic gas in order to separate out the carbon dioxide gases for sequestration. First, SOC submitted geological studies showing that Forestdale is located on the Union Shale geologic unit, which consists of a 4,000-foot-deep layer of shale deposits overlying a sandstone layer known as the Comptom Formation. This formation is said to be an ideal location for a carbon capture and storage facility and is very similar to the Decatur Carbon Sequestration Demonstration facility in Illinois, which is sponsored by the United States Department of Energy. Second, SOC submitted the 2005 Rhodes and Keith Study, which concluded that a biomass gasification, steam reformation, carbon sequestration, and energy production plant was technically and economically feasible using technologies already in use with an overall electric generation efficiency of approximately 25 percent [note: this efficiency is approximately the same as that for Sylvanergy's proposed advanced stoker wood fired boiler] and could achieve a carbon sequestration efficiency of 55 percent. The Rhodes and Keith Study concluded that such a plant could generate electricity at a cost of approximately 9 cents per kilowatt hour, with costs converted to year-2000 dollars and assuming no market for carbon offsets. The study also concluded that the cost per kilowatt hour would decrease with an available market for selling carbon offsets generated by sequestration. Finally, SOC submitted an analysis by an environmental economist, Dr. Costanza Outt, updating the costs assumed in the Rhodes and

Keith Study. Dr. Outt concluded that, taking into account inflation and cost increases since 2000, the reduced transportation costs of on-site carbon storage facilities due to the site geology, and the existing market for carbon credits available to Sylvanergy on the Outer States Greenhouse Exchange (a regional greenhouse gas emissions trading system), Sylvanergy's cost per kilowatt hour for generating electricity using wood gasification and carbon sequestration would remain about 9 cents per kilowatt hour. NUARB did not reject any of the factual assertions made by SOC. Regarding the Sustainable Forest Plan, SOC submitted extensive comments and ecological studies asserting that monoculture forestry practices as contemplated by the Sustainable Forest Plan destroy biodiversity and promote tree diseases and pest invasions. Conversely, the New Union Loggers Association submitted comments regarding the employment that will be provided by a dedicated New Union-based source of wood fuel feedstocks for the facility.

On July 10, 2014, both Sylvanergy and SOC filed timely petitions for review of the final PSD permit with the Environmental Appeals Board (EAB) pursuant to 40 C.F.R. § 124.19(a) (2015), requesting that the permit be remanded to NUARB for further consideration. Sylvanergy challenged both NUARB's initial denial of its Non-Applicability Determination request and the final PSD permit. As to the final permit, Sylvanergy argued that as a biomass facility, it should not be subject to BACT review for its biogenic greenhouse gases, and, even if it is subject to BACT for those gases, biofuel combustion should have been considered BACT per se, and the Sustainable Forest Plan constituted an impermissible "beyond-the-fence" measure outside of the control of Sylvanergy's control. SOC argued that NUARB erred by rejecting wood gasification and carbon sequestration as BACT and that the Sustainable Forest Plan should have been rejected under BACT step 4 as having unacceptable adverse environmental impacts.

On June 1, 2015, the EAB denied both petitions for review, concluding as an initial matter that it lacked jurisdiction to review NUARB's denial of Sylvanergy's NAD request pursuant to 40 C.F.R. § 124.19(a), which confers jurisdiction to the EAB to review only a "PSD final permit decision." Regarding the

contents of the final permit, the EAB concluded that none of the issues raised constituted a “clearly erroneous finding of fact or conclusion of law” or “an important matter of policy or exercise of discretion” that warranted exercise of its jurisdiction pursuant to 40 C.F.R. § 124.19(a). Specifically, the EAB concluded that (1) current legal authority did not provide grounds to exempt Sylvanergy’s biogenic greenhouse gas emissions from PSD review; (2) the Sustainable Forest Plan was within the control of Sylvanergy and its adoption did not constitute clear error by NUARB; and (3) NUARB did not commit clear error when it determined that requiring wood gasification and carbon sequestration would impermissibly “redefine” the Sylvanergy facility. The EAB order provided that the Regional Administrator of EPA Region XIII should publish the decision as a final agency action in the Federal Register according to 40 C.F.R. § 124.19(2)-(3). Sylvanergy and SOC filed timely petitions to the United States Court of Appeals for the Twelfth Circuit pursuant to section 307(b) of the Clean Air Act, 42 U.S.C. § 7607(b)(1) (2012), seeking judicial review of the final decision of Regional Administrator Shaney Granger.

## II. ISSUES

The parties have been ordered to brief the following issues on appeal:

- Whether the Court has **jurisdiction** to review NUARB's denial of Sylvanergy's request for a **Non-Applicability Determination (NAD)**.
  - On appeal, **Sylvanergy** will argue that the Court has jurisdiction to review the NAD issue.
  - On appeal, **SOC** and **Granger** will argue that the Court lacks jurisdiction to review the NAD issue.
- If the Court has jurisdiction to review the denial of the NAD, whether NUARB properly determined that the Sylvanergy facility is a **major emitting facility** subject to PSD review because it is a **fossil-fuel fired source** subject to the 100 ton-per-year threshold under section 169(1) of the Clean Air Act, 42 U.S.C. § 7479(1) (2012).
  - On appeal, **Sylvanergy** and **Granger** will argue that the biomass facility is not a fossil-fuel fired source merely because it will use diesel-fueled startup burners.
  - On appeal, **SOC** will argue that the facility is a fossil-fuel fired source because it will burn diesel fuel to run the startup burners, and the 100 ton-per-year threshold applies because the facility will have a total heat input of over 250 MMBtu/year.
- If the Sylvanergy facility is not a fossil-fuel fired source, whether it nonetheless is a **major emitting facility** triggering PSD review because it has the **potential to emit** more than 250 tons per year of carbon monoxide.
  - On appeal, **Sylvanergy** will argue that PSD review is not triggered because the Forestdale site plan approval limits it to 75-percent operational capacity, thus limiting its potential to emit carbon monoxide to 190 tons per year.
  - On appeal, **SOC** and **Granger** will argue that the proposed facility has the potential to emit more than 250 tons per year of carbon monoxide, thus

triggering PSD review, because the site plan limitations are not federally enforceable.

- Whether a biomass facility is subject to PSD review as an **emitter of greenhouse gases**.
  - On appeal, **Sylvanergy** will argue that biomass-fueled facilities are de facto exempt from PSD review for greenhouse gases.
  - On appeal, **SOC** and **Granger** will argue that biomass facilities are subject to PSD review for greenhouse gases and that Sylvanergy meets the threshold emissions level to trigger such review.
- Whether NUARB properly rejected consideration of a **wood gasification and partial carbon capture and storage plant** as BACT for GHG emissions from the facility.
  - On appeal, **SOC** will argue that that NUARB improperly rejected this option in its BACT analysis.
  - On appeal, **Sylvanergy** and **Granger** will argue that NUARB properly rejected it.
- Whether NUARB permissibly imposed the **Sustainable Forest Plan** as BACT for the GHG emissions from the facility.
  - On appeal, **Granger** will argue that it was permissible for NUARB to impose the Plan as BACT.
  - On appeal, **Sylvanergy** and **SOC** argue it was impermissible to impose the Plan as BACT.

### III. STANDARD OF REVIEW

Jurisdiction is conferred on the United States courts of appeals to review these petitions by section 307(b) of the Clean Air Act, 42 U.S.C. § 7607(b) (2012). Section 307(b)(1) allows for review not only of specifically enumerated actions by the EPA Administrator (such as rulemakings for NAAQS or setting of emission standards), but also of “any other final action of the Administrator under this chapter . . . which is locally or regionally applicable,” if filed in the appropriate circuit. *Id.*; see also *Harrison v. PPG Indus., Inc.*, 446 U.S. 578, 587-92 (1980)

(interpreting section 307(b)(1) to reach “any action of the Administrator under the Act that is ‘final’ and not taken under a specifically enumerated provision” in section 307(b)(1)). Here, the PSD permit issued by NUARB is attributed to EPA because NUARB has authority to issue federal permits on EPA’s behalf. *See* 40 C.F.R. § 52.21(u) (2015); *see also In re Milford Power Plant*, 8 E.A.D. 670, 673 (EAB 1999). The Court’s review should in general focus on NUARB’s decision, rather than the EAB’s order denying review and its underlying reasoning. *Cf. Chabot-Las Positas Cmty. Coll. Dist. v. EPA*, 482 F. App’x 219, 221 (9th Cir. 2012); *Sierra Club v. EPA*, 762 F.3d 971, 979, 978-84 (9th Cir. 2014). However, EAB’s analysis may nonetheless be relevant, and at least one court has framed its decision on an EPA BACT determination as upholding the Board’s ruling. *See Sierra Club v. EPA*, 499 F.3d 653, 657 (7th Cir. 2007). “Generally, parties petitioning for review of agency decisions may only rely on evidence in the administrative record.” *U.S. Magnesium v. EPA*, 690 F.3d 1157, 1164 (10th Cir. 2012).

Although the statute includes a specified standard of review for certain subsections, such as for informal rulemakings by EPA, *see* 42 U.S.C. § 7607(d)(9) (2012), the statute is silent on the standard of review for other types of agency actions. In such cases it is appropriate for the Court to proceed pursuant to the Administrative Procedure Act’s general standard of review for agency actions. *See Alaska Dep’t of Env’tl. Conservation v. EPA*, 540 U.S. 461, 496–97 & n. 18 (2004); *NRDC v. EPA*, 638 F.3d 1183, 1190 (9th Cir. 2011). Accordingly, the Court may set aside the challenged PSD permit decision if it is “arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law.” 5 U.S.C. § 706(2)(A) (2012). The Court’s review of the agency’s interpretation of the statute that Congress has entrusted it to administer must be guided by *Chevron* deference. *See Chevron v. NRDC*, 467 U.S. 837, 843 (1984) (holding that where the Clean Air Act is either “silent or ambiguous with respect to the specific issue, the question for the court is whether the agency’s answer is based on a permissible construction of the statute”). “A reviewing court must generally be at its most deferential” when the agency is “making predictions, within its area of special expertise, at the frontiers of science.” *Baltimore Gas & Elec. Co. v. NRDC*, 462 U.S. 87, 103 (1983).



#### IV. JURISDICTION: DOES THE COURT HAVE JURISDICTION TO REVIEW NUARB'S DENIAL OF THE NON-APPLICABILITY DETERMINATION?

The Court has jurisdiction to review the final PSD permit decision pursuant to section 307(b)(1) of the Clean Air Act, 42 U.S.C. § 7607(b)(1), which provides for reviews of “any other final action of the Administrator under this chapter . . . which is locally or regionally applicable,” if filed in the appropriate circuit. Appeals pursuant to this provision are subject to a sixty-day statute of limitations, which begins to run when notice of the final action appears in the Federal Register. *Id.* Here, there has been a final agency action on the PSD permit because Sylvanergy and SOC have exhausted their administrative remedies, “the Environmental Appeals Board issue[d] notice to the parties that the petition for review has been denied,” and the EPA Regional Administrator published notice of the final agency action in the Federal Register. 40 CFR § 124.19(l)(2)(i), (3) (2015). The issue of whether the Court also has jurisdiction to concurrently review NUARB’s denial of the Non-Applicability Determination (NAD) request will turn on whether the NAD is itself a final decision of the Administrator and whether Sylvanergy missed its opportunity to seek judicial review of the NAD.

The Court’s determination of whether the denial of the NAD is a reviewable final agency action must be distinct from the EAB’s analysis declining to review the issue, *see* Problem at 8, because while the regulations confer jurisdiction on the EAB to review only a “final PSD permit decision,” 40 C.F.R. § 124.19(a), the Courts of Appeal may review “any other final action of the Administrator” under the Clean Air Act, 42 U.S.C. § 7607(b)(1). The Supreme Court has interpreted “final action of the Administrator” under section 307(b)(1) to track the APA’s final agency action requirement. *See Alaska Dept. of Envtl. Conservation v. EPA*, 540 U.S. 461, 483 (2004) (holding that EPA compliance orders were a final agency action where “EPA had asserted its final position on the factual circumstances underpinning the Agency’s orders” and “practical and legal consequences” resulted); *see also Harrison v. PPG Industries, Inc.*, 446 U.S. 578, 586-92 (1980) (holding that the EPA

Administrator's decision regarding applicability of section 111 NSPS to a facility's waste-heat boilers was a locally applicable, final agency action subject to review pursuant to the section 307(b)(1) "any other final action" provision). To be final, an agency action must "mark the consummation of the agency's decisionmaking process," and rights or obligations or other legal consequences must flow from the decision. *Bennett v. Spear*, 520 U.S. 154, 177-78 (1997). Nonfinal decisions, including decisions where the petitioner has not exhausted his or her administrative remedies, are considered "interlocutory" and do not warrant review in federal court unless a relevant exception to the final judgment rule applies. See *Puerto Rican Cement Co. v. EPA*, 889 F.2d 292, 295 (1st Cir. 1989).

**Sylvanergy** will argue that although legal consequences do flow from a NAD decision, the NAD process can also be seen as a step in the PSD review process. With respect to the final PSD permit decision, Sylvanergy's petition is timely. The NAD process is not explicated in the statute nor in the regulations; rather, it is an informal system to help the agency determine if it will proceed with full PSD review. There is support for this position in *FTC v. Standard Oil Co.*, 449 U.S. 232, 244 (1980), in which the Supreme Court held that an FTC decision to initiate administrative proceedings against a company was not final for the purposes of review, despite the "substantial" burden imposed on the company to participate in the proceedings. Under the APA, agency actions that are merely "preliminary, procedural, or intermediate" are subject to judicial review at the termination of the proceeding in which the interlocutory ruling is made. See 5 U.S.C. § 704 (2012). **Sylvanergy** may argue that a similar approach should be applied to review under section 307(b)(1) of the Clean Air Act, and that review of the NAD denial is most appropriate at this final stage, where the more concrete legal consequences of permit conditions have been imposed. This position also lends itself to a judicial economy argument that the EPA PSD review process should be reviewed in a single proceeding rather than in a piecemeal fashion. **SOC** and **EPA** can respond with a policy argument that administrative resources are more effectively used if section 307(b)(1) is read to allow for review of NAD decisions early on: If the Court were to reverse NUARB's denial of the NAD because PSD review was not necessary, both the agency and the

applicant could avoid the costly and time-consuming process of PSD review.

**SOC** and **EPA** have a persuasive argument based on *Puerto Rican Cement*, 889 F.2d 292, that NUARB's denial of the NAD is a final agency action, but it is an action separate from the final permit decision and its review is now barred due to the sixty-day jurisdictional time limitation. In *Puerto Rican Cement*, EPA denied a request for a NAD, and the petitioner appealed the NAD issue directly to the court before EPA continued with the permitting process. The First Circuit held that the NAD decision was separately reviewable pursuant to section 307(b)(1) as a "final action of the administrator," in part because the agency's position on PSD applicability was "final and authoritative, [and] court review [would] not 'deprive the agency of the opportunity to refine, revise or clarify the . . . matter at issue.'" *Id.* at 294-96 (citing *Roosevelt Campobello Int'l Park Comm'n v. EPA*, 684 F.2d 1034, 1040 (1st Cir. 1982)). As the First Circuit described it, "EPA . . . has created an administratively separate agency decision making process for granting or denying NADs," which supported a conclusion that EPA had waived exhaustion requirements for the purposes of judicial review of the NAD. *Puerto Rican Cement*, 889 F.2d at 296. Thus, **SOC** and **EPA** can argue that the NAD process is distinct from the final PSD permit, and that Sylvanergy should have sought review within sixty days of NUARB denying the NAD.<sup>5</sup> Because statutory time limitations are jurisdictional in nature, this Court is powerless to review the NAD issue at this time. See *Tex. Mun. Power Agency v. EPA*, 799 F.2d 173, 174 (5th Cir. 1986). This argument is further bolstered by *Hawaiian Electric Company v. EPA*, 723 F.2d 1440, 1442-44 (9th Cir. 1984), in which the Ninth Circuit held that EPA's applicability determination that a proposed change constituted a "major modification" subjecting it to PSD review was a final action reviewable pursuant to section 307(b)(1). "[A]lthough application of the major modification definition is an interim step in the PSD permitting process," the court held, "it has immediate

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5. Although the record does not indicate the specific date on which NUARB denied Sylvanergy's NAD request, this decision would have had to occur before September 12, 2013, when NUARB issued the initial draft PSD permit.

legal consequences, i.e., the requirement of PSD review.” *Id.* at 1442.

In response, **Sylvanergy** can distinguish *Puerto Rican Cement*, in which the court itself recognized that a NAD may not be a final agency action because the company has not at that point exhausted its administrative remedies, and “in principle it could, by following the PSD review procedures,” obtain some form of building permission from EPA. *Puerto Rican Cement*, 889 F.2d at 295. Grappling with the issue of a possible interlocutory appeal, the court seemed to rely in great part on the fact that EPA had not raised any objection to review of the NAD at that early stage, and it thus found that EPA had waived any applicable exhaustion requirements. *See id.* at 296. This is not the case here, as there was never a situation in which Sylvanergy appealed the NAD decision and EPA allowed for early review. Also of potential importance is that in that case, EPA itself denied the NAD rather than the state agency. Unlike a final PSD permit decision, after which the regulations set forth a specific procedure for the EPA Administrator to give her approval, *see* 40 C.F.R. § 124.19(l)(2)(i), the PSD decision lies with NUARB alone and is not published in the Federal Register. Therefore, it may not be fully attributable to EPA as a “final action of the Administrator,” unless it is viewed as a component of the final PSD decision. **SOC** and **EPA** can respond that under the CAA delegation framework, NUARB’s decisions are federal in nature and reviewable pursuant to section 307(b)(1).

**V. APPLICABILITY DETERMINATION: IF THIS COURT HAS JURISDICTION TO REVIEW THE DENIAL OF THE NAD, DID NUARB PROPERLY DETERMINE THAT SYLVANERGY FACILITY IS A “MAJOR EMITTING FACILITY” SUBJECT TO PSD REVIEW?**

NUARB’s denial of Sylvanergy’s request for a non-applicability determination is also, unsurprisingly, referred to as an “applicability determination.” *See* NSR Manual at A. 1. In other words, the agency has determined that PSD review must apply to the facility. *See id.* This issue turns on whether the proposed facility meets the definition of a “major emitting facility”

that will emit regulated pollutants in excess of threshold values. See CAA § 169(1); 42 U.S.C. § 7479(1).

**A. Is the facility a “fossil-fuel fired steam electric plant” subject to the 100 ton-per-year threshold?**

Under section 169(1) of the Act, “major emitting facility” includes and PSD review is triggered for a “fossil-fuel fired steam electric plant” with a heat input exceeding 250 MMBtu when the plant will emit 100 tons per year (tpy) or more of a regulated pollutant. 42 U.S.C. § 7479(1). Here, the Sylvanergy facility has a total heat input capacity of 500 MMBtu per hour. But **Sylvanergy** contends that PSD should never have applied to its proposed facility because it is not a “fossil-fuel fired steam electric plant.” **EPA** agrees with this position, despite NUAERB having reached the opposite conclusion, likely because of EPA’s policy orientation to support the growth of biomass facilities. **SOC**, however, contends that the facility is fossil-fuel fired because it proposes to use diesel fuel to power the two startup burners for the wood-fired boiler. Thus, **SOC** argues, Sylvanergy’s emissions of both NO<sub>x</sub> (110 tpy) and carbon monoxide (255 tpy) are in excess of the 100-tpy threshold to trigger PSD review.

**Sylvanergy** and **EPA** will argue that the facility should not be treated as fossil-fuel fired because it will use ultra-low sulfur diesel fuel *only to start* the electricity generation process, after which point the boiler is powered solely by biomass. Although there is little in the PSD regulations or case law to guide the Court’s interpretation of the term “fossil-fuel fired steam electric plant,”<sup>6</sup> Sylvanergy and EPA can point to definitions found elsewhere in the statute:

- The NSPS regulations define “fossil-fuel-fired steam generating unit” as “a furnace or boiler used in the process of burning fossil fuel for the purpose of

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6. There is also little in the legislative history of the PSD provisions to help draw the line as to when an EGU becomes a “fossil-fuel fired steam electric plant.” For a broad overview of the legislative history surrounding the 1977 Clean Air Act Amendments and their effect on the PSD program, see W. Perry Pendley and J. Michael Morgan, *The Clean Air Act Amendments of 1977: A Select Legislative Analysis*, 13 LAND & WATER L. REV. 747, 749-83 (1978).

producing steam by heat transfer.” 40 C.F.R. § 60.41 (2015).

- The SIP regulations also define “fossil-fuel-fired generator” as “a furnace or boiler used in the process of burning fossil fuel for the *primary purpose* of producing steam by heat transfer.” 40 C.F.R. § 51.100(ee) (2015) (emphasis added).
- “Fossil fuel” is further defined in the NSPS regulations to include “natural gas, petroleum, coal, and any form of solid, liquid, or gaseous fuel derived from such materials for the purpose of creating useful heat.” *Id.*

Although steam from the wood boiler will presumably be used to drive a turbine generator to produce electricity, Sylvanergy is using diesel fuel for start-up only, not for “producing steam by heat transfer.” Rather, the biomass is the material used in the boiler to produce steam. Section 169(1) also includes “fossil-fuel boilers” as an enumerated source category.<sup>7</sup> EPA could have enumerated “wood-fired boilers” in the list of regulated source categories, but it did not, and under the *expressio unius est exclusio alterius* canon of statutory interpretation, the Court should read the list of enumerated sources as excluding biomass plants.

SOC can respond that although the diesel fuel is used for start-up purposes only, the primary goal of the system is nonetheless to produce steam by heat transfer and ultimately produce electricity. This position is supported by the Fifth Circuit’s decision in *PPG Industries v. Harrison*, 660 F.2d 628, 633-34 (5th Cir. 1981), which interpreted the NSPS definition broadly to include not only boilers operating entirely on fossil fuel but also waste heat boilers which used a combination of fossil fuel and waste heat gases. The court stated that waste heat boilers were included because, in a general sense, they are “used in the

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7. The parties may refer to a recent report by the Partnership for Policy Integrity titled *Trees, Trash, and Toxics: How Biomass Energy Has Become the New Coal* (April 2014), which claims to have surveyed 88 biomass facilities, all but five of which have been allowed to emit over the 100-tons-per-year threshold without triggering PSD review. This study, for obvious reasons, is not favorable to Sylvanergy in its general case. It also lacks clear data for its case studies and has been considered a controversial study overall.

process of burning fossil fuel . . . for the purpose of producing steam.” *Id.* at 633. SOC’s position is also supported by EPA’s own interpretation of the statute in its NSR Manual. In its explanation of PSD applicability, EPA distinguished between a hypothetical 300 MMBtu/hr boiler that is permitted to burn *any* fossil fuel, which would be subject to the 100-tpy threshold, and a boiler that is permitted to burn *wood only*, which would not be. See NSR Manual at A.22-23 (1990).

Finally, **Sylvanergy** and **EPA** can point to the fact that the PSD program also breaks PSD review down in terms of “emissions units,” which means “any part of a stationary source that emits or would have the potential to emit any regulated NSR pollutant.” 40 C.F.R. § 51.21(b)(7) (2015). There is an argument here that the start-up burners should be treated separately from the electricity generating unit. Although the biomass facility’s total heat input for biomass is 500 MMBtu, the heat input capacity of the two startup burners (at 60 MMBtu each) is only 120 MMBtu. Thus, the start-up burners as an emissions unit do not meet the 250 MMBtu heat input capacity level. **SOC** can respond that the section 169(1) definition does not specify that the 250 MMBtu heat input need be attributable to fossil fuels only, and that the facility’s combined heat inputs of 500 MMBtu per hour and 120 MMBtu per hour puts it well above the threshold level. If the facility will be emitting regulated pollutants from its stacks and is burning fossil fuels, regulation of this facility as a fossil-fuel fired source is supported by the PSD program’s broad purpose “to protect public health and welfare from any actual or potential adverse effect which in the Administrator’s judgment may reasonably be anticipate to occur from air pollution.” CAA § 160(1), 42 U.S.C. § 7470(1).

**B. Does the facility otherwise have the “potential to emit” more than 250 tons per year of carbon monoxide despite the Village of Forestdale site plan approval?**

If the facility cannot be considered a fossil-fuel fired source, **Sylvanergy** contends it also does not fall under the general category of “any other source with the potential to emit” 250 tons per year or more of regulated air pollutants because, pursuant to the operational limitations imposed on it by the Village of

Forestdale's site plan approval, it will emit at most 190 tons per year of carbon monoxide. **EPA** and **SOC** contend that these limitations are irrelevant because they are not federally enforceable, and as such, PSD is triggered because the facility should be considered to emit 255 tons per year of carbon monoxide. Importantly, EPA has promulgated regulations defining "potential to emit" to include consideration of only those pollution controls that are "federally enforceable." "Potential to emit," or PTE, is defined by 40 C.F.R. § 51.21(b)(4) (2015) as:

The maximum capacity of a stationary source to emit a pollutant under its physical and operational design. *Any physical or operational limitation* on the capacity of the source to emit a pollutant, including air pollution control equipment and restrictions on hours of operation or on the type or amount of material combusted, stored, or processed, shall be treated as part of its design *if the limitation or the effect it would have on emissions is federally enforceable*. Secondary emissions do not count in determining the potential to emit of a stationary source. (Emphasis added).

"Federally enforceable" is further defined by 40 C.F.R. § 51.21(b)(17) (2015) to mean:

all limitations and conditions which are *enforceable by the Administrator*, including those requirements developed pursuant to 40 CFR parts 60 and 61, requirements within any applicable State implementation plan, any permit requirements established pursuant to 40 CFR 52.21 or under regulations approved pursuant to 40 CFR part 51, subpart I, including operating permits issued under an EPA-approved program that is incorporated into the State implementation plan and expressly requires adherence to any permit issued under such program. (Emphasis added).

**SOC** and **EPA** have a persuasive argument that the Village of Forestdale's site approval process is not federally enforceable within the meaning of these regulations so as to affect the analysis of the facility's potential to emit. The record does not indicate that the site plan approval is incorporated in any way into New Union's State Implementation Plan (SIP). The record indicates only that the process was initiated by the Village of



Forestdale, apparently due to zoning concerns about the impact of logging trucks coming in and out of the area to deliver biomass fuel. The 75-percent operational limitation is enforceable by the Forestdale building inspector, but this official does not answer to NUARB. *See* Problem at 5. EPA has also explained in its NSR Manual that “federally enforceable” limitations must be either “contained in a permit issued pursuant to an EPA-approved permitting program or a permit directly issued by EPA, or . . . submitted to EPA as a revision to a State Implementation Plan and approved as such by EPA.” NSR Manual at C.3; *see also* CAA § 110, 42 U.S.C. § 7410 (2012) (SIP requirement provisions). EPA need not take Sylvanergy at its word that it will operate at only 75-percent capacity, as that limitation is not included in the final permit as part of NUARB’s EPA-approved permitting program, has not been approved as part of New Union’s SIP, and is not otherwise federally enforceable. Sylvanergy could have ensured that these limitations were placed in its final PSD permit with NUARB—a common practice that allows facilities to become “synthetic minors” subject to an abbreviated permitting process—but Sylvanergy did not, thus raising the question of whether they really intend to comply with the limits.

**Sylvanergy** should point to *National Mining Ass’n v. EPA*, 59 F.3d 1351, 1364-65 (D.C. Cir. 1995), which held that a parallel definition of PTE under the National Emission Standards for Hazardous Air Pollutants (NESHAPS) permitting provisions, 40 C.F.R. § 63.2 (2015), was an unreasonable standard because it failed to include mechanisms that are practically effective, even if not “federally enforceable,” in the determination of a facility’s PTE. The D.C. Circuit did not vacate the regulation in that case, but it did indicate that state or local controls, when “demonstrably effective,” should not be disregarded in considering whether a facility is a “major” source in the context of NESHAPS. *Id.* at 1364. **SOC** and **EPA** can point to differences between the NESHAPS statutory language and the PSD language to distinguish the *National Mining Association* case. Unlike the PSD definition of “major emitting facility,” 42 U.S.C. § 7479(1), the NESHAPS provision defines “major source” for the purposes of triggering review as “any stationary source or group of stationary sources located within a contiguous area and under common control that emits or has the potential to emit

*considering controls*, in the aggregate, 10 tons per year or more of any hazardous air pollutant or 25 tons per year or more of any combination of hazardous air pollutants.” CAA § 112(a)(1); 42 U.S.C. § 7412(a)(1) (2012) (emphasis added). The court in *National Mining Association* referred to EPA’s directive to “consider[] controls” to support its argument that controls imposed by a state or locality should be considered in the PTE analysis. 59 F.3d at 1364. Because the PSD provisions do not contain a broad directive for EPA to “consider[] controls,” the PSD applicability analysis should be limited to considering those operations limitations that are enforceable by EPA.<sup>8</sup>

In *Chemical Manufacturers Ass’n v. EPA*, No. 89-1514, 1995 WL 650098 (D.C. Cir. Sept. 15, 1995), the D.C. Circuit remanded the PTE definition in the PSD regulations to EPA in an unpublished decision. The court also vacated the federal enforceability requirement of the PTE definition. In so doing, the court referenced its previous decision regarding the NESHAPS PTE regulations in *National Mining Association*. In response, EPA issued an “interim policy,” explaining that the term “federally enforceable” should now be read to mean “federally enforceable or legally and practicably enforceable by a state or local air pollution control agency.” EPA, INTERIM POLICY ON FEDERAL ENFORCEABILITY OF LIMITATIONS ON POTENTIAL TO EMIT 3-4 (1996), *available at* [www.epa.gov/ttn/oarpg/t5/memoranda/pte122.pdf](http://www.epa.gov/ttn/oarpg/t5/memoranda/pte122.pdf). Since then, EPA has not promulgated new definitions for PTE or “federally enforceable” under the PSD regulations. **Sylvanergy** may argue that the definitions are therefore void. *See, e.g., Alabama Power Co. v. EPA*, 40 F.3d 450, 456 (D.C. Cir.1994) (stating that “the effect of [a] vacatur of the regulation is to suspend the . . . compliance obligation pending further rulemaking by the agency).

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8. In addition, the NESHAPS regulations, unlike the PSD regulations, include a list of specific examples of “federally enforceable limitations” including limitations found in a Title V operating permit or in a state- or federally-approved SIP. 40 C.F.R. § 63.2 (2015); *see also* 59 FR 12408-01 (Mar. 16, 1994) (adding this language to the regulations). Notably, the examples do not include any local or state requirements as part of separate regulatory programs as the Forestdale site plan approval does here. **SOC** and **EPA** can argue that if this arguably “broader” consideration of controls for PTE analysis under the NESHAPS provision does not include state and local controls, PTE under the PSD program certainly does not account for such controls or limitations.

**Sylvanergy** can also make a policy argument that the CAA is designed to allow state and local regulators to take the lead in meeting air pollution standards, and that—even if the 75-percent operational limitation as imposed by the site approval process is not part of New Union’s SIP—it should still be factored into the facility’s potential to emit. **SOC** and **EPA** ultimately have the stronger argument that, even if the regulation is void, EPA’s interim policy remains in effect, and the limitations would still have to be enforceable by NUARB as the air pollution control agency to be factored into **Sylvanergy**’s PTE.

#### VI. PSD REVIEW FOR GREENHOUSE GASES: IS A BIOMASS-FUELED FACILITY IS SUBJECT TO PSD REVIEW AS AN EMITTER OF GREENHOUSE GASES?

As an initial matter, **Sylvanergy** maintains that its emissions of non-greenhouse gas emissions do not meet the thresholds to trigger PSD review. *See supra* Part V. Thus, the parties must address whether the facility, biomass or no biomass, is subject to PSD review for its potential to emit 350,000 tons per year of greenhouse gases in light of *Utility Air Regulatory Group v. EPA* (“*UARG*”), 134 S. Ct. 2427, 573 U.S. \_\_, \_\_ (2014). The Supreme Court held in that case that sources not otherwise subject to PSD review cannot become subject to review “based solely on their emission of greenhouse gases.” *Id.* at 2443. The result of this holding was to partially vacate EPA’s 2010 GHG Tailoring Rule, in which the agency provided that PSD review would apply to new sources with the potential to emit at least 100,000 tons per year CO<sub>2</sub>e and modified sources with net increased emissions of 75,000 tons per year CO<sub>2</sub>e. *See* 75 Fed. Reg. 31514 (June 3, 2010). **Sylvanergy** will cite to *UARG* for the proposition that its greenhouse gas emissions do not, in themselves, subject the facility to PSD review.

**EPA** and **SOC** contend that the facility is an “anyway source”—that is, its emission of other regulated pollutants (i.e. carbon monoxide and potentially NO<sub>x</sub>, *see supra* Part V) trigger PSD review anyway. The current regulations provide that anyway sources will be subject to PSD review for greenhouse gas emissions if emissions exceed 75,000 tons per year CO<sub>2</sub>e. *See* 40

C.F.R. § 51.21(49)(iv)(a). In *UARG*, the Supreme Court confirmed that this general approach, known as “Step 1” of EPA’s Tailoring Rule, was consistent with the CAA regulatory scheme. *See* 134 S. Ct. at 2448-49. However, the Court was concerned about the methodology that EPA used to arrive at 75,000 tons per year as a threshold level, and it compelled EPA to promulgate a new “de minimis” threshold level for triggering of PSD review. *Id.* at 2449. The Court did not expressly void the 75,000-tpy threshold level, but implied that EPA should undergo a new rulemaking to arrive at a true *de minimis* level. *See id.* EPA has not yet published a proposed or final rule adjusting the threshold. EPA has indicated that in the interim, it plans to continue applying the existing 75,000-tpy threshold to new anyway sources.<sup>9</sup> **EPA** and **SOC** will argue that 75,000-tpy remains the appropriate threshold in light of existing regulations and because the Court did not expressly void Step 1 of the Tailoring Rule. **Sylvanergy** will argue that it should not be required to undergo PSD review for greenhouse gases until EPA promulgates a new, appropriate *de minimis* threshold level.

With regard to the facility’s unique characteristics as a biomass-fueled electricity plant, the parties will raise, as the EAB did, EPA’s 2011 “Deferral Rule” for biogenic sources. This rule deferred application of PSD and Title V permitting requirements to CO<sub>2</sub> emissions from biogenic stationary sources for three years in order to give the agency additional time to study the impacts of and develop an accounting framework for greenhouse gas emissions from these sources. *See Deferral for CO<sub>2</sub> Emissions from Bioenergy and Other Biogenic Sources Under the Prevention of Significant Deterioration (PSD) and Title V Programs*, 76 Fed. Reg. 43,490 (July 20, 2011). In the rule, EPA defined “biogenic CO<sub>2</sub> emissions” as “emissions of CO<sub>2</sub> from a stationary source directly resulting from the combustion or decomposition of biologically-based materials other than fossil fuels and mineral sources of carbon,” such as the “combustion of biological material, including all types of wood and wood waste, forest residue, and

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9. This approach has not been upheld by any court, but it is referenced in internal EPA memos. *See, e.g.,* JANET G. MCCABE, LETTER TO REGIONAL ADMINISTRATORS (July 24, 2014), *available at* <http://www3.epa.gov/nsr/documents/20140724memo.pdf>.

agricultural material.” *Deferral Rule*, 76 Fed. Reg. at 43,493. EPA also noted that “at least some biomass feedstocks” used in energy production may have a “negligible impact on the net carbon cycle, or possibly even a positive net effect.” 76 Fed. Reg. at 43,499. Policy goals to promote renewable energy development provided the foundation for this three year deferral:

EPA recognizes that use of certain types of biomass can be part of the national strategy to reduce dependence on fossil fuels, [and] efforts are underway at the Federal, State and regional level to foster the expansion of renewable resources and promote bioenergy projects when they are a way to address climate change, increasing domestic alternative energy production, enhancing forest management and creating related employment opportunities. We believe part of fostering this development is to ensure that those feedstocks with negligible net atmospheric impact not be subject to unnecessary regulation. At the same time, it is important that EPA have time to conduct its detailed examination of the science and technical issues related to accounting for biogenic CO<sub>2</sub> emissions and therefore have finalized this deferral.

*Id.*, 76 Fed. Reg. at 43,492. However, the Deferral Rule, by its own terms, expired on July 21, 2014. *Id.*, 76 Fed. Reg. at 43,507. Additionally, in *Center for Biological Diversity v. EPA*, 722 F.3d 401 (D.C. Cir. 2013), the D.C. Circuit, in a split decision, vacated the Deferral Rule based on EPA’s failure to explain how the Clean Air Act provided it with authority to exempt biogenic carbon dioxide sources from the PSD permitting program and its improper use of the “one-step-at-a-time” doctrine of agency decisionmaking when it was unclear what would constitute ultimate, “full compliance” with the Act’s statutory mandates.<sup>10</sup> *See id.* at 410. The court did not, however, hold that EPA could

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10. It is unclear whether the D.C. Circuit’s mandate in *Center for Biological Diversity v. EPA*, 722 F.3d 401 (D.C. Cir. 2013) was ever finalized, as the Court ruled in November 2013 that the appeal deadline would be extended until the Supreme Court issued its opinion in the *UARG* case. In 2015, the court denied a petition for rehearing filed by the respondent-intervenors. *See Center for Biological Diversity v. EPA*, 2015 U.S. App. LEXIS 12908 \*1 (July 24, 2015). This should not be of consequence due to the Deferral Rule’s expiration in 2014.

never create a future, permanent exemption for biogenic sources from the PSD and Title V permitting programs.

**Sylvanergy** may try to argue that when it received its final permit from NUARB on June 12, 2014, the Deferral Rule was still in effect. **EPA** and **SOC** will counter that the rule was voided by the D.C. Circuit's holding in *CBD v. EPA*, 722 F.3d 401 (D.C. Cir. 2013). Further, the EPA Administrator must enforce the regulations are they are currently in effect when she takes final action. See *General Motors Corp. v. United States*, 496 U.S. 530, 540 (1990); *Sierra Club v. EPA*, 762 F.3d 971, 979 (9th Cir. 2014). In this case, the "final action" occurred when the Administrator placed her final stamp of approval on the permit pursuant to 40 C.F.R. § 124.19(l)(2)(i), (3), after June 1, 2015. Had the NUARB permit circumvented PSD review for greenhouse gases based on an exemption, Granger would have been obligated to remand the permit at that point as inconsistent with current federal law. The EAB also presumed for the purposes of its holding on June 1, 2015, that the Deferral Rule had expired by its own terms.

Following the *UARG* decision and the expiration of the Deferral Rule, EPA's plans for its future regulatory approach to greenhouse gas emissions from biogenic sources appear to be in flux. In a letter sent to Regional Administrators in July 2014, Acting Assistant Administrator of the EPA Office of Air and Radiation, Janet McCabe, stated that the agency's work on the biogenic CO<sub>2</sub> assessment framework remains ongoing and recommended that the Regional Offices "consult with sources and permitting authorities on biomass related permitting questions as they arise." In November 2014, EPA issued a second draft of its technical report, the *Framework for Assessing Biogenic CO<sub>2</sub> Emissions from Stationary Sources* (2014). Based on a previous peer review by EPA's Science Advisory Board concluding that "[c]arbon neutrality cannot be assumed for all biomass energy," and that the analysis depends greatly on the circumstances in which biomass is grown, harvested, and combusted, the report uses a lifecycle approach to look at biogenic carbon and carbon fluxes associated with these stages. *Id.* at ii-iii, 48-49. It does not draw conclusions regarding which types of biomass feedstocks result in fewer CO<sub>2</sub> emissions, but rather sets forth factors that are to be considered when assessing these emissions and presents

an equation that could be used to calculate net atmospheric contributions of biogenic CO<sub>2</sub> emissions. *See id.* at 13. As of December 2015, this accounting framework is not finalized and is still awaiting additional peer review comments of the Science Advisory Board.

This issue lends itself to a number of policy arguments that each party can make. **Sylvanergy** will argue that requiring PSD review for its greenhouse gas emissions is duplicative and unnecessary given the unique posture of biogenic CO<sub>2</sub> emissions. The record in this case does not include enough relevant data for the parties to assess biogenic CO<sub>2</sub> emissions of the Forestdale biomass facility using the accounting framework described above. However, Sylvanergy may argue that the Framework is indicative of EPA's intention to continue treating biomass plants differently from other stationary sources under the PSD program as sources that can play a role in *reducing* global greenhouse gas emissions. Sylvanergy will also point to EPA's 2011 *Guidance for Determining Best Available Control Technology for Reducing Carbon Dioxide Emissions from Biogenic Production*, which EPA indicated would serve as interim guidance until it completes its accounting framework process, described *supra*. In these guidelines, EPA explained how biogenic CO<sub>2</sub> emissions, which account for 97.9% of the global warming potential (GWP) of emissions from wood and wood residuals, are unique because these emissions participate directly in the global carbon cycle through photosynthesis, while plant material outside the boundaries of the facility also counteract CO<sub>2</sub> emissions by sequestering carbon on a continuous basis. *See id.* at 7-8.

**EPA** and **SOC** will argue that without any other express exemption for biogenic emissions, the agency's decision to conduct PSD review for those emissions does not rise to the level of "arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law." 5 U.S.C. § 706(2)(A) (2012). **EPA and SOC** also have a persuasive argument that in the absence of scientific certainty on the greenhouse gas intensity of biogenic sources, the court should defer to the expertise of the agency in determining how to regulate greenhouse gases from biomass. *See Baltimore Gas & Elec. Co. v. NRDC*, 462 U.S. 87, 103 (1983); *Sierra Club v. EPA*, 499 F.3d 653 (7th Cir. 2007). EPA's 2011

guidance document also recognized that not all biomass feedstocks result in zero net emissions, and indeed, the accounting framework indicates the agency's intention to move away from a broad permitting exemption and toward a case-by-case analysis of the carbon emissions lifecycle associated with each facility. The D.C. Circuit in *CBD v. EPA* concluded that such analysis and determination of appropriate control technology is most appropriately left to the rigorous BACT analysis that takes place during PSD permitting. 722 F.3d at 409, 411.

**Sylvanergy** may argue that (1) the biomass feedstock it had hoped to use (outside the context of the Sustainable Forest Plan) is often made up of decomposing forest waste, which would emit greenhouse gases either way; (2) when viewed over the long-term, forest re-growth and re-absorption of CO<sub>2</sub> makes up for emissions from operations; and/or (3) increased demand for biomass will actually lead to investments in forestry and incentivize forest growth. **SOC** may counter that biomass emissions should be measured not from the lifecycle perspective, but on a timeframe closer to when the emissions arise from combustion. This should also take into account indirect impacts of biomass plants, which may include deforestation due to increased demand for biomass feedstock and the use of whole trees rather than forest waste, which results in more greenhouse gas emissions.

## VII. BACT REQUIREMENTS FOR GREENHOUSE GAS EMISSIONS

New facilities subject to PSD review must achieve emissions limits that reflect the Best Available Control Technology, or BACT, for regulated pollutants emitted from their facilities at significant rates. CAA § 165(a)(4), 42 U.S.C. § 7475(a)(4). The Supreme Court held in *UARG* that EPA was within its authority to require BACT for “greenhouse gases emitted by sources otherwise subject to PSD review,” if the source emits more than a *de minimis* amount of greenhouse gases. 134 S. Ct. at 2448-49. BACT is defined as



an emission limitation based on the maximum degree of reduction of each pollutant subject to regulation under this chapter emitted from or which results from any major emitting facility, which the permitting authority, on a case-by-case basis, taking into account energy, environmental, and economic impacts and other costs, determines is achievable for such facility through application of production processes and available methods, systems, and techniques, including fuel cleaning, clean fuels, or treatment or innovative fuel combustion techniques for control of each such pollutant.

CAA §169, 42 U.S.C. § 7479(3); *see also* 40 C.F.R. § 52.21(b)(12) (2015). In 1990, EPA published its “NSR Manual,” which explains how EPA and state agencies should determine BACT for a particular facility by applying a top-down process, identifying all available control technologies for a given pollutant and ranking them in descending order of control effectiveness. This process comprises five steps:

1. Identify all potentially available control technology options;
2. Eliminate “technically infeasible” control options;
3. Rank the remaining technologies in terms of effectiveness, with the most effective technology ranked at the top;
4. Confirm or reject the top-ranked technology taking into account energy, environmental, and economic impacts; and
5. Select the most effective control technology not eliminated in step 4.

*See* NSR Manual at B.5-9. As the EAB has recognized, the NSR Manual, while not binding on the agency, offers the “careful and detailed analysis of BACT criteria required by the CAA and regulations” and “has guided states and federal permitting authorities on PSD requirements and policy for many years.” *In re. N. Mich. Univ. Ripley Heating Plant*, 14 E.A.D. 283 (EAB 2009) (quotation marks omitted). A discussion of the two BACT-related issues in the Problem follows.

**A. Did NUARB properly reject consideration of a wood gasification and partial carbon capture and storage plant**

**as BACT for the Sylvanergy facility?**

SOC contends that NUARB—and, by extension, EPA—abused its discretion by rejecting wood gasification and partial carbon capture and storage as BACT for the Sylvanergy facility. NUARB rejected this option as an option that would impermissibly “redefine” the source. *See* Problem at 7. The EAB agreed, referring to EPA’s policy against considering facility alterations that change the fundamental nature of the source, and concluding that because Sylvanergy had proposed to generate electricity by burning wood, NUARB did not commit “clear error” when it opted not to require the facility to gasify wood and burn the gas in a combined cycle generation unit. *See* Problem at 13-14. In *In re Prairie State Generating Co.*, 13 E.A.D. 1, 23, 28 (EAB 2006), the EAB held that this issue boils down to Step 1 of the BACT analysis and that EPA need not include in its Step 1 list of available technologies those that redefine the fundamental purpose or the basic design of the proposed facility. In an opinion upholding the *Prairie State* decision, the Seventh Circuit held that “[r]efining the statutory definition of ‘control technology’ . . . to exclude redesign is the kind of judgment by an administrative agency to which a reviewing court should defer.” *Sierra Club v. EPA*, 499 F.3d 653, 655 (7th Cir. 2007).

SOC will first argue that requiring this technology would not redefine the source. In *Prairie State*, the state agency did not consider low-sulfur coal from outside sources as BACT for a power plant because the plant was proposed to be built at the mouth of a mine so that it could use the mine’s 30-year supply of recoverable coal. 13 E.A.D. at 24, 28. As the court in *Sierra Club v. EPA* pointed out, however, there is no bright line between “where control technology ends and a redesign of the proposed facility begins.” 499 F.3d 653, 655. In order to guide which design aspects may be within the reach of BACT, the EAB has given central importance to “how the permit applicant defines the proposed facility’s purpose or basic design,” *Prairie State*, 13 E.A.D. at 28, and the permit issuer should take a “hard look” at this definition. *Id.* at 34-35; *accord N. Michigan Univ. Ripley Heating Plant*, 14 E.A.D. at 303 & n.28. Those design elements that “may be changed to achieve pollutant emissions reductions without disrupting the applicant’s basic business purpose for the

proposed facility” may be appropriately considered under Step 1. *Prairie State*, 13 E.A.D. at 23.

In *In re Desert Rock Energy Co.*, 14 E.A.D. 484, 524-40 (EAB 2009), the EAB held that the permitting agency failed to provide a sufficient explanation for why requiring the use of integrated combined gasification combined cycle (IGCC) technology for a coal power plant, which would otherwise use a typical pulverized coal process to burn coal and boil water to create steam, would redefine the source. At the state level, the Supreme Court of Utah issued a similar ruling for a coal-fired power plant in 2009, concluding that:

[T]he basic design of the Power Company’s proposed facility is an electric power generating plant fueled by coal. With this purpose, it is evident that the Power Company was not required to consider wind generation for electric power as an alternative process. However, as in the *Prairie State* BACT analysis . . . the Power Company should have included IGCC in its BACT review. IGCC is a control technology that can reduce the emissions of several criteria pollutants. The adoption of this standard would not require the Power Company to redefine the design of its proposed facility. The facility would still remain an electric power generating plant fueled by coal. We note that the consideration of IGCC in the BACT review does not compel its adoption; instead, it only requires the Power Company to subject IGCC to the five-step top down analysis used to determine the best available technology.

*Utah Chapter of Sierra Club v. Air Quality Bd.*, 226 P.3d 719, 732-33 (Utah 2009). Here, requiring Sylvanergy to install wood gasification and partial carbon capture as a control technology would not take away the facility’s identity as an electric power generating plant fueled by biomass. SOC has a compelling argument under this line of cases that NUARB should have listed this technology under Step 1, which is intended to capture a broad array of potential options, and if not, should have provided a reasoned, detailed explanation for why it would redefine the source. See *N. Mich. Univ. Ripley Heating Plant*, 14 E.A.D. at 331 (remanding state PSD permit decision and requiring that any decision that a particular fuel choice would improperly redefine the source “must be thoroughly explained and supported with references to suitable legal authority”).

**SOC** will also argue that requiring partial carbon capture and storage fits well within the statutory framework. According to the plain language of the statute, “control technologies” can include “fuel cleaning, clean fuels, or treatment or *innovative fuel combustion techniques*.” CAA §169, 42 U.S.C. § 7479(3). The argument that partial carbon capture and storage fits within this definition is supported by EPA’s own interpretations. In its *Guidance for Determining Best Available Control Technology for Reducing Carbon Dioxide Emissions from Biogenic Production* (2011), which is likely still in effect, *see id.* at 5, EPA states that it “classifies carbon capture and sequestration as an add-on pollution control technology that is ‘available’ for large CO<sub>2</sub>-emitting facilities.” *Id.* at 13. The EAB has held that “the question of availability for purposes of BACT is a practical, factual determination, using conventional notions of whether the technology can be put into use.” *In re Pennsauken*, 2 E.A.D. 667 (Adm’r 1988). Technical feasibility is not considered at Step 1, and EPA stated in its guidelines that “even technologies that are in the initial stages of full development and deployment for an industry, such as CCS, can be considered ‘available’ as that term is used for the specific purposes of a BACT analysis under the PSD program.” *Guidance for Determining BACT* at 14 n.27. Requiring this technology is consistent with the Clean Air Act’s “technology-forcing” regulatory regime, which courts have long recognized. *See, e.g., Sierra Club v. Costle*, 657 F.2d 298, 365 (D.C. Cir. 1981). **Sylvanergy** and **EPA** may counter that EPA’s guidance indicates that such add-on pollution control is to be listed under Step 1 only for industrial facilities with high-purity CO<sub>2</sub> streams, such as hydrogen production and ethanol production, *see Guidance for Determining BACT* at 13-14. If **SOC** successfully argues the above points, it can stop there, as this is a sufficient basis to remand the permit. **SOC** may also point to the details of the study it submitted on the record for the proposition that the proposed technology is technologically and economically feasible and preferable from an environmental standpoint. This analysis, however, goes to Step 4 of the BACT process, and would be for NUARB to consider on remand.

**Sylvanergy** and **EPA** will likely aim to analogize **Sylvanergy’s** case with *Prairie State*, *Ripley Heating Plant*, and other similar cases and rely on the fact that the technology **SOC**

proposes would require Sylvanergy to make extensive technical modifications to its facility in a way that alters the proposed design, which turns on its wood-fired boiler. Importantly, **Sylvanergy** and **EPA** can rely on the deferential standard of review that courts grant agencies dealing with close cases in areas requiring technical expertise. See *Baltimore Gas & Elec. Co. v. NRDC, Inc.*, 462 U.S. 87, 103 (1983); *Sierra Club v. EPA*, 499 F.3d 653, 656 (“We hesitate in a borderline case, such as this, to pronounce the EPA’s decision arbitrary, the applicable standard for judicial review of its granting the permit.”). In the alternative, **EPA** and **Sylvanergy** may try to argue that any error in failing to consider this technology, or failing to explain its decision, was harmless error because the technology would prove to be technically infeasible (Step 2) or prohibitively expensive (Step 4), would not be selected as BACT, and thus, would have no bearing on the final agency action. Cf. *National Ass’n of Home Builders v. Defenders of Wildlife*, 551 U.S. 644, 659-60 (2007) (recognizing the existence of harmless error rule in administrative law).

**B. Is the Sustainable Forest Plan permissible as BACT for the Sylvanergy facility?**

Finally, **Sylvanergy** contends that EPA abused its discretion by allowing the Sustainable Forest Plan to be imposed in the PSD permit as BACT. As it did before the EAB, Sylvanergy will make a two-pronged argument: (1) biomass fuel is in itself a form of BACT and should be the top-ranked option in Step 3, and (2) the Sustainable Forest Plan is a “beyond-the-fence” mitigation measure for greenhouse gas emissions, which does not fall within the plain meaning of “control technology” as defined by the Act, 42 U.S.C. § 7479(3), and thus should have been rejected under Step 1. **SOC** argues that the Sustainable Forest Plan should have been rejected under BACT step 4 as having unacceptable adverse environmental impacts. The EAB, analyzing these arguments in turn, concluded that none of the issues raised by the parties rose to the level of “clear error” on the part of NUARB.

**Sylvanergy** will argue, as an initial matter, that its proposal to use biomass fuel should have been considered as a form of BACT in itself. It can point again to EPA’s *Guidance for*

*Determining Best Available Control Technology for Reducing Carbon Monoxide Emissions from Biogenic Production* (2011), in which EPA laid out an analysis that it “believes . . . will be sufficient in most cases to support the conclusion that utilization of biomass fuel alone is BACT for a bioenergy facility.” *Id.* at 5. **SOC** and **EPA** can respond that although this may have been EPA’s position in 2011, the 2014 draft accounting framework indicates the agency’s growing recognition of the vast variability of carbon emissions from one biomass facility to another, depending on the source of biofuel, indirect impacts, and associated lifecycle emissions. The newest draft framework for analyzing these emissions is in part in response to the Science Advisory Board’s conclusion that “[t]here is considerable heterogeneity in feedstock types, sources and production methods and thus net biogenic carbon emissions will vary considerably.” *Framework for Assessing Biogenic CO<sub>2</sub> Emissions* at ii-iii; see also *Guidance for Determining BACT* at 21-22. In addition, EPA has recognized that individual cases may warrant certain issues being addressed through the BACT process, and that the permitting authority has discretion to make decisions based on the facts before it. Here, as the EAB recognized in the decision below, Sylvanergy is not only using fossil fuels to run its startup burners; it has also made no commitment that its fuel sources would be sustainability harvested or that it would otherwise control its estimated 350,000 tons per year of greenhouse gas emissions.

**Sylvanergy** will next argue that, even if use of biofuel is not in itself a form of BACT, the Sustainable Forest Plan cannot constitute BACT, which is defined as “an emissions limitation . . . which the Administrator, on a case-by-case basis taking into account energy, environmental, and economic impacts and other costs, determines is achievable . . . through application of production processes or available methods, systems, and techniques, including fuel cleaning or treatment or innovative fuel combustion techniques for control of such pollutant.” CAA § 169, 42 U.S.C. § 7479(3). A dedicated reforestation area does not “control” the emissions coming out of Sylvanergy’s stacks, it will argue, but rather offsets them through long-term

sequestration processes, which are outside of Sylvanergy's control.<sup>11</sup> EPA may respond by pointing to the fact that Sylvanergy's initial argument—that use of biofuels is BACT in itself—relies on the idea that sequestration occurs over time. This occurs offsite and over long timeframes and is equally outside of the company's control.

EPA will argue that the Sustainable Forest Plan is a permissible form of control technology given the unique characteristics of greenhouse gas emissions and that the Plan was the only control option presented that was “potentially available” within the meaning of the statute. EPA can argue that the statutory language does not require any particular type of control technology, but rather focuses on finding “an emission limitation based on the maximum degree of reduction” unique to the specific characteristics and needs of the facility. Because greenhouse gases are a global pollutant for which local environmental and health impacts are difficult to identify and quantify, the agency is branching out from traditional “end-of-stack” environmental controls in favor of methods that allow for meaningful reduction of greenhouse gas emissions. This includes the consideration of energy efficiency measures as BACT. See *Guidance for Determining BACT* at 14. In the seminal case *Chevron v. NRDC*, 467 U.S. 837, 845 (1984), the Supreme Court held that EPA's “bubble concept” for treating industrial grouping together for the purposes of PSD permitting was a reasonable policy choice for the agency to make. Similarly, here, where there is no regulatory language excluding offsite control measures, EPA will argue it has discretion to apply them. EPA also has a persuasive argument that *Chevron* “Step 2” deference should apply to its interpretation of law. Because the statutory language

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11. Sylvanergy can also make a “redefining the source” argument parallel to the one it makes regarding partial carbon capture and sequestration, see *supra* Part VII(A). By requiring it to purchase a specific plot of land and manage a forest to produce its own biofuel, NUARB has impermissibly changed the source from what Sylvanergy proposed, which was to purchase feedstock from offsite and process it onsite. See *In re Prairie State Generating Co.*, 13 E.A.D. 1, 23, 28 (EAB 2006); *Sierra Club v. EPA*, 499 F.3d 653, 655 (7th Cir. 2007). The strength of this argument is undermined, however, by the fact that Sylvanergy did not identify a specific feedstock or source from where it planned to obtain feedstock. Thus the source of biomass feedstock was arguably not part of the facility's basic purpose or design.

neither expressly includes nor excludes offsite control measures, the statute may be considered ambiguous with regard to this issue, at which point the Court should defer to the agency and uphold its position if it is “based on a permissible construction of the statute.” *Id.* at 843. Given the technical and scientifically complex nature of the BACT process for greenhouse gases, the Court should be “at its most deferential.” *Baltimore Gas & Elec. Co.*, 462 U.S. 87, 103 (1983).

EPA may or may not choose to point to its recent rules issued under section 111(d) of the Act, 42 U.S.C. § 7411(d), also known as its Clean Power Plan for existing power plants. EPA considered certain beyond-the-fence measures during the rulemaking process, *see* 79 Fed. Reg. 34,829, 34,888-89 (June 18, 2014), and, not only specific technologies, but “the full range of operational practices, limitations, constraints and opportunities that bear upon EGUs’ emission performance.” *Carbon Pollution Emission Guidelines for Existing Stationary Sources: Electric Utility Generating Units* (Unofficial Version) at 27 (August 3, 2015).<sup>12</sup> **Sylvanergy** may counter that, unlike BACT, the section 111 technology requirement for the Best System of Emissions Reduction (BSER) is broader and not defined in the statute, thus making it more appropriate for application of beyond-the-fence measures.

SOC’s strongest argument is that the permit should be remanded for NUARB’s failure to consider its comments and explain its reasoning in the permit decision. *See Motor Vehicle Mfrs. Ass’n v. State Farm Mut. Auto. Ins.*, 463 U.S. 29, 43-44 (1983) (holding that an agency action is arbitrary and capricious if it “entirely fail[s] to consider an important aspect of the problem” or if it fails to articulate a “rational connection between the facts found and the choice made”). Here, SOC has developed a record to support its proposition by submitting extensive comments and studies regarding the negative impacts of monoculture coppice plantings, and NUARB provided no response

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12. **Note that competitors are not permitted to cite to the final version of the Clean Power Plan**, which was published in the Federal Register in October 2015, after the September 1 cutoff date for the Problem, and goes into effect on December 22, 2015, *See Carbon Pollution Emission Guidelines for Existing Stationary Sources: Electric Utility Generating Units*, 80 FR 64,662-01, 64,667 (October 23, 2015).



at all. Related to this point, **SOC** can argue that NUARB's top-down BACT analysis was insufficient because Step 4 requires the agency to take into account energy, environmental, and economic impacts. Referred to by EPA as "collateral impacts analysis," see *Guidance for Determining BACT* at 17, Step 4 requires the agency to consider a wide range of environmental impacts, both direct and indirect. See NSR Manual at B.46. The consideration of collateral environmental impacts may require rejection of a less stringent control option in favor of a more stringent option, such as partial carbon capture and storage. See *In re N. Cty. Res. Recovery Assocs.*, 2 E.A.D. 229, 230-31 (Adm'r 1986). **EPA** may counter that it did consider these environmental impacts, but that they were outweighed by the environmental benefits of the creation of renewable energy facility and the fact that the Sustainable Forest Plan was economically feasible for Sylvanergy, also important considerations in the Step 4 process of selecting the top-ranked control option. See Problem at 12.

### VIII. SAMPLE QUESTIONS FOR JUDGES

These questions are suggested as a starting point. Please feel free to develop your own.

#### Issue 1: Jurisdiction to Review Denial of NAD Request

- Sylvanergy
  - Does the First Circuit's holding in *Puerto Rican Cement* lend support to or undermine your argument?
  - If you are arguing that the NAD decision is a reviewable final agency action, wouldn't you have had to seek review within the 60-day statute of limitations pursuant to section 307(b)(1) of the Clean Air Act?
  - If you had sought judicial review directly following NUARB's denial of your NAD request, could we have reviewed that as a "final action of the Administrator" of EPA?
- SOC and Granger/EPA

- How do you respond to the holding of the First Circuit in *Puerto Rican Cement*, which held that a NAD is separately reviewable as a “final action of the Administrator?”
- How does our jurisdiction differ from that of Environmental Appeal Board’s? That is, if the EAB could not review the NAD decision, why would it be the case that this Court may review it?
- Isn’t the NAD request and denial just an interim step in the PSD process?
- Wouldn’t this issue have been an interlocutory appeal if Sylvanergy sought review of it prior to the final PSD permit determination? If so, how could the company ever seek review of that decision if not as part of this appeal?
- Would the federal courts even have jurisdiction to consider a NAD determination by a state agency that has not been adopted by EPA?

**Issue 2(a): Applicability Determination - Fossil-Fuel Fired Steam Electric Plant**

- Sylvanergy and Granger/EPA
  - If Sylvanergy proposes to use diesel fuel to fire its startup burners, how is the boiler and associated technology not “fossil-fuel fired?”
  - Is the term “fossil-fuel fired steam electric plant” defined in the PSD regulations?
  - What do you regard as the appropriate standard for our review of this determination by NUARB? Should it be different given that EPA is arguing a position different from NUARB’s?
- SOC
  - What regulatory definitions are you using to conclude that the Sylvanergy facility is a fossil-fuel fired steam electric plant?

- The record states that the ultra-low sulfur diesel start-up burners each have a heat input capacity of 60 MMBtu. Because these added together amount to less than the 250 MMBtu required to make a fossil-fuel fired source a major emitting facility, how can we conclude that the facility meets the section 169(1) definition?

**Issue 2(b): Applicability Determination – Potential to Emit**

- Sylvanergy
  - How do you respond to the regulatory definitions and cases of the Environmental Appeals Board confirming that operational limitations must be federally enforceable in order to be factored into your potential to emit (PTE)?
  - Why should EPA essentially take you at your word that the facility will abide by this operational limitation and not emit above the threshold amounts of carbon monoxide? Could you not have asked to include them in the final PSD permit?
  - Is the holding of *National Mining Association v. EPA* applicable to this case given that NESHAPS is a different provision of the Act? Importantly, the triggering provisions for NESHAPS ask the agency to “consider controls” as part of the potential to emit, see CAA § 112(a)(1).
- SOC and Granger/EPA
  - Why should we not follow the D.C. Circuit’s holding in *National Mining Association v. EPA*, which was that “demonstrably effective” state and local controls should not be disregarded in the PTE calculation just because the NESHAPS regulations required controls to be federally enforceable?

- Are the PTE definitions voided by the D.C. Circuit's holding in the unpublished *Chemical Manufacturers Association* case, which vacated the federal enforceability requirement right after the *National Mining* holding?
- What if the village site plan approval process was incorporated into New Union's State Implementation Plan? Would your answer be different?

**Issue 3: Applicability of PSD review to biogenic GHG emissions**

- Sylvanergy
  - Do you concede that you are an “anyway” source under the Supreme Court's *UARG* holding because of your emissions of other non-greenhouse gas pollutants?
  - If the Deferral Rule expired by its own terms on July 21, 2014, *and* was vacated by the D.C. Circuit, how is there any argument that greenhouse gas emissions from biomass sources are somehow exempt from the PSD program?
  - Why would this Court not follow the legislative purpose behind the PSD program, which is to protect public health and welfare from any adverse effects from air pollution and to prevent new non-attainment areas from arising?
  - Would you say the statute is ambiguous with regard to whether EPA should regulate greenhouse gas emissions from biogenic sources? If so, isn't this a situation where we apply *Chevron* deference to the agency's interpretation of law?
- SOC and Granger/EPA
  - How do you address the Supreme Court's holding in the *UARG* case? Didn't it vacate the

Tailoring Rule and leave EPA without authority to regulate greenhouse gases under the PSD program?

- Whose decision are we reviewing here? That of NUARB, or the Environmental Appeals Board?
- Hasn't EPA itself recognized in previous guidance documents that biomass fuel sources often result in net-zero carbon emissions? Isn't PSD review unnecessary?
- Would you say that we are in the realm of *Chevron* Step 1 or Step 2? Is the statute ambiguous with regard to EPA's authority to regulate biogenic greenhouse gas emissions?

#### Issue 4: Wood Gasification and Partial CCS as BACT

- SOC
  - Doesn't the *Prairie State* case and the 7<sup>th</sup> Circuit decision upholding the EAB's decision tell us that if a control technology requires major design modifications to the facility, it must be rejected under Step 1 of BACT?
  - Because there is no bright line rule with regard to when a control technology crosses over and starts to "redefine the source," shouldn't this Court defer to the agency's technical determination given its expertise?
  - Is this wood gasification and partial carbon capture technologically feasible? Is one study based on a hypothetical plant really enough to tell us that it will work on the ground?
    - [Note: The strongest response here is that the Court need not reach that issue to remand the permit under Step 1 of BACT analysis.]
- Sylvanergy and Granger/EPA
  - Even if the agency had no intentions of selecting this technology as BACT, don't the holdings of the Environmental Appeals Board

tell us that NUARB should nonetheless have considered it under Step 1, which is intended to capture a wide array of possible technologies, even if they are in their initial stages of development?

- What did Sylvanergy propose as the facility's "basic purpose or design?" Would the use of this control technology really change the facility's fundamental identity as a biomass-fired electricity plant?
- If nothing else, shouldn't NUARB have provided a more detailed explanation for why this technology would redefine the source? Don't we have a basis to remand the final permit on this procedural basis alone?

#### **Issue 5: Sustainable Forest Plan as BACT**

- Sylvanergy
  - Are you arguing that the use of biomass fuels is, standing alone, BACT for your facility? Doesn't EPA's draft accounting framework for biogenic carbon emissions indicate that there is too much variability for a blanket statement like this to be appropriate?
  - Doesn't the regulatory definition of BACT allow NUARB to consider a wide array of "production processes" and "systems" and "techniques?"
  - Aren't greenhouse gases and the way that they cycle through the earth's atmosphere unique in a way that warrants innovative forms of BACT?
  - If the law neither expressly allows nor disallows offsite mitigation, shouldn't we defer to the interpretation of the agency in this scientifically complex area, where each BACT decision is made on a detailed case-by-case basis?

- EPA
  - How is a broad, all-encompassing “Plan” that requires Sylvanergy to purchase land and use it as dedicated fuel a form of “control technology”? Even if it is, does carbon sequestration in the reforestation area “control” the emissions coming out of Sylvanergy’s stacks?
  - Under *State Farm* and other cases, wasn’t it arbitrary and capricious for the agency to not consider the comments submitted by SOC regarding the environmental impacts of the Plan and explain on the record why they did not affect the final decision?
- SOC
  - At what step of the BACT process would you expect the agency to take these environmental concerns into consideration?
  - What result would you hope for on remand? If EPA considers your proposed technology alternative as impermissibly redefining the source, what other result could there be?
  - Isn’t any error on the part of the agency in failing to consider your comments harmless, given the great environmental benefits of creating a renewable biomass energy facility and the greater economic costs of your proposed partial CCS alternative?